

**REMARKS**

The Office Action dated September 7, 2006 has been reviewed carefully and it is believed that the application is in condition for allowance.

**Claim Objections**

Claim 16 was objected to because of the informality and the correction has been made herein.

**Claim Rejections- 35 USC § 102**

Claims 11, 15-17, 19 and 20 were rejected under 35 USC § 102(e) as being anticipated by United States Patent No. 6,590,370 to Leach (“Leach”).

Applicant’s invention as set forth in representative claim 11 comprises in part:

A method of dynamically controlling and managing operating characteristics of a fuel cell system, including the steps of:

(A) providing a DC-DC converter circuit having an input connection to receive the output of a fuel cell, and connected to place a load across the fuel cell, said DC-DC converter circuit having internal switches that are operated at a duty cycle that is adjustable;

(B) providing a programmable controller that receives as an input, present and stored values of one or more operating characteristics, said programmable controller also being programmed to signal said DC-DC converter switches to adjust its duty cycle;

(C) identifying a weakest cell in a fuel cell stack;  
(D) measuring the output voltage of the weakest cell;

- (E) dynamically determining a desired value for said output voltage;
- (F) comparing a present value of said weakest cell output voltage with a desired value;
- (G) calculating a new duty cycle for the associated DC-DC converter within the fuel cell system required to substantially achieve said desired value for the output voltage of the weakest cell; and
- (H) signaling said DC-DC converter to adjust its duty cycle to said new duty cycle.

Leach discloses a switching dc-dc converter for use in a fuel cell power source wherein the duty cycle is adjusted. Applicant's control system can use the DC-DC converter of Leach to control various operating characteristics of a fuel cell system. More specifically, Leach does not describe measuring a weakest cell output voltage.

Similarly, claims 15 and 16 include features that a plurality of operating characteristics are measured, and calculations are made of a duty cycle depending upon those measurements. Claim 19 relates to using a temperature range, which is not taught by Leach. Claim 20 recites adjusting fuel concentration, which is also not described by Leach.

Consequently, the Leach patent is legally precluding from anticipating Applicant's claimed invention claimed due to the absence therefrom of these and other features of Applicant's invention.

Claim Rejections- 35 USC § 103

Applicants respectfully urge that the Leach patent is disqualified under 35 U.S.C. § 103(c) as a reference under 35 U.S.C. § 103(a) against the instant application for a U.S. Patent. Leach and the present invention were, at the time the invention was made, owned by MTI MicroFuel Cells Inc. or subject to an obligation of assignment to MTI MicroFuel Cells Inc.

The statute 35 U.S.C. § 103(c) states as follows:

Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

As noted, the statute indicates that prior art which qualifies only under one or more of subsections (e), (f), and (g) of section 102 shall not preclude patentability under § 103(c) where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. 35 U.S.C. § 102 provides as follows:

A person shall be entitled to a patent unless—

Section 102(a) “the invention...was patented...in this...country...before the invention thereof by the applicant.”

Leach does not qualify as prior art under 102(a) because the applicant’s invention date was prior to the patenting of Leach on July 8, 2003. Applicants’ invention date preceded the patent date of Leach.

Section 102(b) provides “the invention was patented...more than one year prior to the date of the application for patent in the United States”.

Leach does not qualify as prior art under 102(b) because the instant application was filed on November 21, 2003, which is not more than one year from the patenting of Leach on July 8, 2003.

Section 102(c) precludes patentability when one has “abandoned the invention.”

Leach does not qualify as prior art under Section 102(c) because Applicants have not abandoned the present invention.

Section 102(d) precludes patentability when “the invention was first patented or caused to be patented...in a foreign country prior to the date of the application for patent in this country on an application for patent...filed more than 12 months before the filing of the application in the United States.”

Leach does not qualify as prior art under Section 102(d) because the present application was not filed in a foreign country before filing in the United States.

Accordingly, Applicants respectfully urge that the Leach reference qualifies as prior art only under 35 U.S.C. § 102(e), 102(f) or 102(g) and therefore is disqualified from serving as a reference under 35 U.S.C. § 103(a) by operation of 35 U.S.C. § 103(c).

### Summary

All of the objections and rejections raised by the Examiner have been addressed herein. It is respectfully submitted that the application is now in condition for allowance. Please do not hesitate to contact the undersigned in order to advance the prosecution of this application in any respect.

Please charge any additional fee occasioned by this paper to our Deposit Account  
No. 03-1237.

Respectfully submitted,



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